Faculty of Electrical and Computer Engineering

The Institute of Electrical Power Systems and High Voltage Engineering is looking at the Chair of Electrical Power Supply for a Research Associate

(Subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting as soon as possible. The position is limited until 31.08.2021. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVg). The position offers the chance to obtain further academic qualification (e.g. PhD).

For many years, the Institute of Electrical Power Systems and High Voltage Engineering is working on the topics protection in low, high and very high-voltage networks, power quality, smart grids, inductive transformer, neutral point treatment and network planning. Both public funded projects as well as joint research projects with industry and network operators are processed very successfully. A high integration of distributed generation and an efficient use of electric energy represent the main focus of the energy policy in Germany. This means for low-voltage networks, a further increase in the proportion of distributed generation units (DG) to use renewable energies as well as the continuous increase in efficiency from electronic devices. To achieve these goals, power electronic circuit technologies are used in most cases, which work with switching frequencies above 2 kHz (e.g. active power factor correction for switching power supplies or in intelligent charging DC-converters for electric vehicles, self-commutated inverters for photovoltaic systems).

Tasks:
- Development of reliable algorithms for the detection of resonances in public low voltage networks;
- Validation of the algorithms by software simulation;
- Design and implementation of a laboratory setup to verify and optimize the algorithms under controlled conditions;
- Organisation and management of grid measurements with a demonstrator, including analysis of measurement data with regard to the efficiency of the developed algorithms.

Requirements:
- Excellent university degree (Master or equivalent) in electrical power engineering or related disciplines;
- Solid knowledge in electrical measurement technology;
- Enjoying the computer-assisted solution of engineering-related tasks (MATLAB, Simulink, PowerFactory) and the knowledge transfer as well as support of students.
- You are resilient and have a desire to work together in an interdisciplinary young team of qualified scientists?

Applications from women are particularly welcome. The same applies to people with disabilities. Please send your complete application documents, including curriculum vitae and degree copies at the latest by January, 25th 2019 (stamped arrival date of the university central mail service applies) to TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Elektrische Energieversorgung und Hochspannungstechnik, Professor für Elektroenergieversorgung, Herrn Prof. Dr.-Ing. Peter Schegner, Helmholtzstr. 10, 01069 Dresden, Germany. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis